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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,151	12/19/2001	Ertugrul Berkcan	RD-28,476	8199

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EXAMINER	
NGUYEN, JIMMY	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,151	BERKCAN ET AL.	
	Examiner	Art Unit	
	Jimmy Nguyen	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4, 6- 14, 16-24, 26 -29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6- 14, 16-24, 26 -29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Argument

In response to RCE filed 7/16/04, the examiner hereby present new ground of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 4, 6 - 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sies et al (US 6225716).

As to claim 1, Sies et al disclose (fig 2) a current sensor for an apparatus comprising;

A conductor (25, bracket) comprising an aperture (55) therethrough and a plurality of hall effect devices (11) inserted at least partially within aperture (55), conductor (25) is configured to generate a magnetic field having a pre-determined shape, each hall effect device (11) configured to detect pre-determined shape and generate an output (fig 2).

As to claim 3, Sies et al disclose (fig 2) the magnetic field has a pre-determined spatial dependence.

As to claim 4, Sies et al disclose (fig 2) the hall effect device (11) output is substantially insensitive to magnetic fields having other than the pre - determined shape.

As to claim 6, Sies et al disclose (fig 2) the hall effect device (11) output comprises a non-linear component.

As to claim 7, Sies et al disclose (fig 2) the current sensor further comprise a plurality of hall effect devices (11) and separated by pre-determined distance

As to claims 8, 9, Sies et al disclose (fig 2) the magnetic field comprises at least a first magnetic field component having a first direction and a second magnetic field component having a second direction different from first direction and the at least two magnetic field components having the same direction (this cause by the hall effect devices 11).

As to claim 10, A conductor (25, bracket) comprising an aperture (55) therethrough and a plurality of hall effect devices (11) inserted at least partially within aperture (55), conductor (25) is configured to generate a magnetic field having a pre-determined shape, each hall effect device (11) configured to detect pre-determined shape and generate an output (fig 2) and the magnetic field comprises at least a first magnetic field component having a first direction and a second magnetic field component having a second direction different from first direction and the at least two magnetic field components having the same direction (this cause by the hall effect devices 11).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sies et al (US 6225716) in view of Dames et al (US 6414475)

As to claim 2, Sies et al discloses (fig 1) the current sensor. However, Sies et al do not disclose the current sensor using the residential electricity meter. On the hand, Dames et al teach the current sensor (1) using for the residential meter (20).

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the current sensor of Sies and use within the electricity meter of Dames et al for the purpose of sensing current in the power line.

5. Claims 11 – 14, 16 – 24, 26 - 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plis et al (US 5854995) in view of Sies et al (US 6225716).

As to claims 11, 12, 20, 21, 22, 29, Plis et al disclose (fig 1) a residential electricity meter and a method for sensing voltage and current comprising a voltage sensor (110) and a current sensor (120). However, Plis et al is silent on the structure of the current sensor comprising a conductor comprising an aperture therethrough and a plurality of hall effect devices inserted at least partially within slit, conductor is configured to generate a magnetic field having a pre-determined shape, each hall effect device configured to detect pre-determined shape and generate an output .

On the other hand, Sies et al disclose (fig 2) a current sensor comprising a conductor (25) comprising a aperture therethrough (55) and a plurality of hall effect devices (11) inserted at least partially within aperture (55), conductor (25) is configured to generate a magnetic field having a pre-determined shape, each hall effect device (11) configured to detect pre-determined shape and generate an output (fig 2).

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the current sensor within the electricity meter of Plis

et al and use within the current sensor of Bruchmann for the purpose of sensing current in the power line.

As to claims 13, 23, Sies et al discloses (fig 2) the magnetic field has a pre-determined spatial dependence.

As to claim 14, Sies et al discloses (fig 2) the hall effect device (11) output is substantially insensitive to magnetic fields having other than the pre-determined shape.

As to claims 16, 24, Sies et al discloses (fig 2) the hall effect device (11) output comprises a non-linear component.

As to claims 17, **26**, Sies et al discloses (fig 2) the current sensor further comprise a plurality of hall effect devices (11) and separated by pre-determined distance

As to claims 18, 19, **27, 28**, Sies et al discloses (fig 2) the magnetic field comprises at least a first magnetic field component having a first direction and a second magnetic field component having a second direction different from first direction and the at least two magnetic field components having the same direction (this cause by the hall effect devices 11).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen at (571) 272-1965. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.

JN.
August 5, 2004

DAVID ZARNEKE
PRIMARY EXAMINER
8/9/04